NAS NORTH ISLAND - NAVY REGION SOUTHWEST
NAVY ENVIRONMENTAL LEADERSHIP PROGRAM

POLLUTION PREVENTION

STENCILING/MARKING SYSTEM

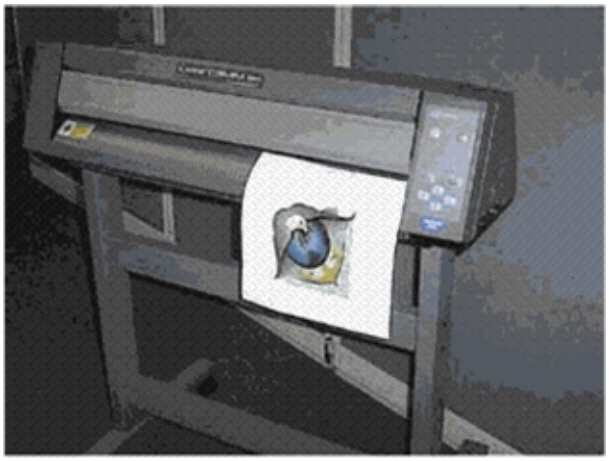
LEAD ACTIVITY
Naval Air Station (NAS) North Island

STATUS
Complete

MISSION
Reduce air emissions and hazardous waste

REQUIREMENT
Aerosol paints produce harmful air emissions and generate paint and paint wastes requiring hazardous waste disposal. A system is required at Navy sites to replace aerosol paints for letter and number markings.

DESCRIPTION
The traditional method of marking equipment requires the use of a stencil, masking tape, and paint. This method generates paint and paint wastes, such as spray cans, tape, rags, and solvent that must be disposed of as hazardous waste. Commercial equipment is available that can generate and print labels, markings, signs, and instruction plates on a variety of engineered adhesive-backed materials without generating air emissions or hazardous wastes. The system can be used to address the marking, stenciling, and sign-making needs for any activity or ship at Navy installations.



Stenciling/Marking System

The Improved Stenciling and Marking System at NAS North Island (and other Navy sites) is a prototype effort of the Chief of Naval Operations (CNO) Pollution Prevention Equipment Program (PPEP) involving procurement, installation, training, and demonstration of pollution prevention equipment. The Improved Stenciling and Marking System is a color graphics output device capable of printing and cutting vinyl and films at least 12-inches wide. The high-performance vinyls use an adhesive to secure the image or sign to its designated location. The vinyls have an outdoor durability of up to 7 years, and the image has a guaranteed outdoor life of 3 to 5 years. Both the image and the vinyl are replaced at the same time, as needed.

Currently the Naval Air Warfare Center (NAWC) Lakehurst Aircraft Division is testing two systems: the Roland Color Pro and the Gerber Edge. The two systems are being evaluated using site requirement and environmental testing parameters. Site requirements were completed in February 1998 and consisted of obtaining baseline data from the sites (documenting existing methods and waste streams for marking a variety of support equipment), and obtaining the information required to generate the new signs (equipment type, sign specifications). Feedback information collected from the sites regarding, for example, ease of application, visual effectiveness, initial adherence, and any special supplies required by the sites will be used to modify the systems if needed. In addition, NAWC Lakehurst is performing laboratory environmental testing on the signs to determine their durability in a marine environment. Monthly inspections of the signs will be conducted to monitor their durability. One of the NAWC Lakehurst systems will be sent to the Aircraft Intermediate Maintenance Department (AIMD) at NAS North Island in the spring of 1999 for implementation.

BENEFITS

- Reduces paint-related volatile organic compounds (VOCs) and air emissions
- Reduces the quantity of hazardous waste generated
- Reduces use and disposal of solvents and paints
- Eliminates worker exposure to harmful paints and solvents

ACCOMPLISHMENTS/CURRENT STATUS

Date	Activity
FEB 1998	Collection of baseline data from sites completed
MAR 1998	Equipment delivered to NAWC Lakehurst. Operational Test Plan completed
APR 1998	System became operational and prototype testing began at NAWC Lakehurst
MAY 1999	System implemented at NAS North Island
JUN 1999	Final report, including cost benefit analysis, issued

FUTURE PLAN OF ACTION & MILESTONES

Not Applicable

COLLABORATION/TECHNOLOGY TRANSFER

Through partnering efforts with PPEP and NAWC Lakehurst, NAS North Island will obtain the improved marking and stenciling system.

BIBLIOGRAPHY

None available

RELATED GOVERNMENT INTERNET SITES

PPEP Book:-Improved Stenciling and Marking System

RELATED NAVY GUIDEBOOK REQUIREMENTS

- 10003 Cost Effective Waste Reduction

UPDATED: 01/23/02